

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.**

Application Serial Number: 09/857,581C
Source: 1FW16
Date Processed by STIC: 6/27/06

ENTERED

CRF Errors Edited by the STIC Systems Branch

Serial Number: 09/857,581C

CRF Edit Date: 6/27/06
Edited by: h

___ Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line

___ Corrected the SEQ ID NO. Sequence numbers edited were:

___ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

___ Deleted: ___ invalid beginning/end-of-file text ; ___ page numbers

___ Inserted mandatory headings/numeric identifiers, specifically:

___ Moved responses to same line as heading/numeric identifier, specifically:

___ Other:



IFW16

RAW SEQUENCE LISTING

DATE: 06/27/2006

PATENT APPLICATION: US/09/857,581C

TIME: 16:52:46

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\06272006\I857581C.raw

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3 <110> APPLICANT: Fader, Gary M.
4     Jung, Woosuk
5     Brian, McGonigle
6     Odell, Joan T.
7     Yu, Xiaodan
9 <120> TITLE OF INVENTION: Nucleic Acid Fragments Encoding Isoflavone Synthase
11 <130> FILE REFERENCE: BB1339RCE
13 <140> CURRENT APPLICATION NUMBER: 09/857,581C
C--> 14 <141> CURRENT FILING DATE: 2001-06-05
16 <150> PRIOR APPLICATION NUMBER: PCT/US00/01772
17 <151> PRIOR FILING DATE: 2000-01-26
19 <150> PRIOR APPLICATION NUMBER: 60/117,769
20 <151> PRIOR FILING DATE: 1999-01-27
22 <150> PRIOR APPLICATION NUMBER: 60/144,783
23 <151> PRIOR FILING DATE: 1990-07-20
25 <150> PRIOR APPLICATION NUMBER: 60/156,094
26 <151> PRIOR FILING DATE: 1999-09-24
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33 <211> LENGTH: 1756
34 <212> TYPE: DNA
35 <213> ORGANISM: Glycine max
37 <400> SEQUENCE: 1
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39 ttcacgatgt tgctggaact tgcacttggt ttgtttgtgt tagctttggt tctgcacttg      120
40 cgtccacacac caagtgcaaa atcaaaagca cttcgccacc tcccaaacc tccaagccca      180
41 aagcctcgtc ttcccttcat tggccacctt cacctcttaa aagataaact tctccactat      240
42 gcactcatcg atctctccaa aaagcatggc cccttattct ctctctcctt cggctccatg      300
43 ccaaccgtcg ttgcctccac ccctgagttg ttcaagctct tcttccaaac ccacgaggca      360
44 acttctctca acacaaggtt ccaaacctct gccataagac gcctcactta cgacaactct      420
45 gtggccatgg ttccattcgg accttactgg aagttcgtga ggaagctcat catgaacgac      480
46 cttctcaacg ccaccaccgt caacaagctc aggcctttga ggaccaaca gatccgcaag      540
47 ttctttaggg ttatggccca aagcgcagag gcccagaagc cccttgacgt caccgaggag      600
48 cttctcaaat ggaccaacag caccatctcc atgatgatgc tcggcgaggc tgaggagatc      660
49 agagacatcg ctgcgaggt tcttaagatc ttcggcgaat acagcctcac tgacttcac      720
50 tggcctttga agtatctcaa ggttggaag tatgagaaga ggattgatga catcttgaa      780
51 aagttcgacc ctgtcgttga aagggtcatc aagaagcgcc gtgagatcgt cagaaggaga      840
52 aagaacggag aagttgttga gggcgaggcc agcggcgtct tctcgcacac tttgcttgaa      900
53 ttcgctgagg acgagaccat ggagatcaaa attaccaagg agcaaatcaa gggccttggt      960
54 gtcgactttt tctctgcagg gacagattcc acagcgggtg caacagagtg ggcattggca      1020
55 gagctcatca acaatcccag ggtgttgcaa aaggctcgtg aggaggtcta cagtgttgtg      1080
56 ggcaaagata gactcgttga cgaagttgac actcaaaacc ttccttacat tagggccatt      1140

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57 gtgaaggaga cattccgaat gcacccacca ctcccagtg tcaaaagaaa gtgcacagaa 1200
58 gagtgtgaga ttaatgggta tgtgatccca gagggagcat tggttctttt caatgtttgg 1260
59 caagtaggaa gggaccccaa atactgggac agaccatcag aattccgtcc cgagaggttc 1320
60 ttagaaactg gtgctgaagg ggaagcaggg cctcttgatc ttaggggcca gcatttccaa 1380
61 ctctctccat ttgggtcttg gaggagaatg tgccctggtg tcaatttggc tacttcagga 1440
62 atggcaacac ttcttgcatc tcttatccaa tgctttgacc tgcaagtgtt gggccctcaa 1500
63 ggacaaatat tgaaaggtga tgatgccaaa gttagcatgg aagagagagc tggcctcaca 1560
64 gttccaaggg cacatagtct cgtttgtgtt ccacttgcaa ggatcggcgt tgcattctaaa 1620
65 ctcttttctt aattaagata atcatcatat acaatagtag tgtcttgcca tcgcagttgc 1680
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70 <211> LENGTH: 521
71 <212> TYPE: PRT
72 <213> ORGANISM: Glycine max
74 <400> SEQUENCE: 2
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78 His Leu Arg Pro Thr Pro Ser Ala Lys Ser Lys Ala Leu Arg His Leu
79 20 25 30
81 Pro Asn Pro Pro Ser Pro Lys Pro Arg Leu Pro Phe Ile Gly His Leu
82 35 40 45
84 His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Leu Ile Asp Leu Ser
85 50 55 60
87 Lys Lys His Gly Pro Leu Phe Ser Leu Ser Phe Gly Ser Met Pro Thr
88 65 70 75 80
90 Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln Thr His
91 85 90 95
93 Glu Ala Thr Ser Phe Asn Thr Arg Phe Gln Thr Ser Ala Ile Arg Arg
94 100 105 110
96 Leu Thr Tyr Asp Asn Ser Val Ala Met Val Pro Phe Gly Pro Tyr Trp
97 115 120 125
99 Lys Phe Val Arg Lys Leu Ile Met Asn Asp Leu Leu Asn Ala Thr Thr
100 130 135 140
102 Val Asn Lys Leu Arg Pro Leu Arg Thr Gln Gln Ile Arg Lys Phe Leu
103 145 150 155 160
105 Arg Val Met Ala Gln Ser Ala Glu Ala Gln Lys Pro Leu Asp Val Thr
106 165 170 175
108 Glu Glu Leu Leu Lys Trp Thr Asn Ser Thr Ile Ser Met Met Met Leu
109 180 185 190
111 Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu Lys Ile
112 195 200 205
114 Phe Gly Glu Tyr Ser Leu Thr Asp Phe Ile Trp Pro Leu Lys Tyr Leu
115 210 215 220
117 Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn Lys Phe
118 225 230 235 240
120 Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Glu Ile Val Arg
121 245 250 255
123 Arg Arg Lys Asn Gly Glu Val Val Glu Gly Glu Ala Ser Gly Val Phe

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Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\06272006\I857581C.raw

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124          260          265          270
126 Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glu Thr Met Glu Ile Lys
127          275          280          285
129 Ile Thr Lys Glu Gln Ile Lys Gly Leu Val Val Asp Phe Phe Ser Ala
130          290          295          300
132 Gly Thr Asp Ser Thr Ala Val Ala Thr Glu Trp Ala Leu Ala Glu Leu
133 305          310          315          320
135 Ile Asn Asn Pro Arg Val Leu Gln Lys Ala Arg Glu Glu Val Tyr Ser
136          325          330          335
138 Val Val Gly Lys Asp Arg Leu Val Asp Glu Val Asp Thr Gln Asn Leu
139          340          345          350
141 Pro Tyr Ile Arg Ala Ile Val Lys Glu Thr Phe Arg Met His Pro Pro
142          355          360          365
144 Leu Pro Val Val Lys Arg Lys Cys Thr Glu Glu Cys Glu Ile Asn Gly
145          370          375          380
147 Tyr Val Ile Pro Glu Gly Ala Leu Val Leu Phe Asn Val Trp Gln Val
148 385          390          395          400
150 Gly Arg Asp Pro Lys Tyr Trp Asp Arg Pro Ser Glu Phe Arg Pro Glu
151          405          410          415
153 Arg Phe Leu Glu Thr Gly Ala Glu Gly Glu Ala Gly Pro Leu Asp Leu
154          420          425          430
156 Arg Gly Gln His Phe Gln Leu Leu Pro Phe Gly Ser Gly Arg Arg Met
157          435          440          445
159 Cys Pro Gly Val Asn Leu Ala Thr Ser Gly Met Ala Thr Leu Leu Ala
160          450          455          460
162 Ser Leu Ile Gln Cys Phe Asp Leu Gln Val Leu Gly Pro Gln Gly Gln
163 465          470          475          480
165 Ile Leu Lys Gly Asp Asp Ala Lys Val Ser Met Glu Glu Arg Ala Gly
166          485          490          495
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171 Ile Gly Val Ala Ser Lys Leu Leu Ser
172          515          520

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174 <210> SEQ ID NO: 3

175 <211> LENGTH: 27

176 <212> TYPE: DNA

177 <213> ORGANISM: Artificial Sequence

179 <220> FEATURE:

180 <223> OTHER INFORMATION: Oligonucleotide primer used in construction of WHT1

182 <400> SEQUENCE: 3

183 cgggatccat gcaaccggaa accgtcg

27

185 <210> SEQ ID NO: 4

186 <211> LENGTH: 32

187 <212> TYPE: DNA

188 <213> ORGANISM: Artificial Sequence

190 <220> FEATURE:

191 <223> OTHER INFORMATION: Oligonucleotide primer used in construction of yeast strain

WHT1

193 <400> SEQUENCE: 4

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32

RAW SEQUENCE LISTING

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TIME: 16:52:46

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\06272006\I857581C.raw

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198 <212> TYPE: DNA
199 <213> ORGANISM: Artificial Sequence
201 <220> FEATURE:
202 <223> OTHER INFORMATION: Oligonucleotide primer
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209 <212> TYPE: DNA
210 <213> ORGANISM: Artificial Sequence
212 <220> FEATURE:
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215 <400> SEQUENCE: 6
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221 <213> ORGANISM: Artificial Sequence
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230 <211> LENGTH: 27
231 <212> TYPE: DNA
232 <213> ORGANISM: Artificial Sequence
234 <220> FEATURE:
235 <223> OTHER INFORMATION: Oligonucleotide primer
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241 <211> LENGTH: 1824
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243 <213> ORGANISM: Glycine max
245 <400> SEQUENCE: 9
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248 ctgcaaaatc aaaagcactt cgccatctcc caaaccaccc aagcccaaag cctcgtcttc      180
249 ccttcatagg acaccttcat ctcttaaaag acaaacttct ccactacgca ctcatcgacc      240
250 tctccaaaaa acatggtccc ttattctctc tctacttttg ctccatgcca accgttggtg      300
251 cctccacacc agaattgttc aagctcttcc tccaaacgca cgaggcaact tccttcaaca      360
252 caaggttcca aacctcagcc ataagacgcc tcacctatga tagctcagtg gccatggttc      420
253 ccttcggacc ttactggaag ttctgtgagga agctcatcat gaacgacctt cccaacgcca      480
254 ccactgtaaa caagttgagg cctttgagga cccaacagac ccgcaagttc cttagggtta      540
255 tggcccaagg cgcagaggca cagaagcccc ttgacttgac cgaggagctt ctgaaatgga      600
256 ccaacagcac catctccatg atgatgctcg gcgaggctga ggagatcaga gacatcgctc      660
257 gcgaggttct taagatcttt ggcgaatata gcctcactga cttcatctgg ccattgaagc      720

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TIME: 16:52:46

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\06272006\I857581C.raw

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260 ttgttgaggg tgaggtcagc ggggttttcc ttgacacttt gcttgaattc gctgaggatg      900
261 agaccatgga gatcaaaatc accaaggacc acatcgaggg tcttggtgtc gactttttct      960
262 cggcaggaac agactccaca gcggtggcaa cagagtgggc attggcagaa ctcatcaaca     1020
263 atcctaaggt gttggaaaag gctcgtgagg aggtctacag tgttggtgga aaggacagac     1080
264 ttgtggacga agttgacact caaaaccttc cttacattag agcaatcgtg aaggagacat     1140
265 tccgcatgca cccgccactc ccagtgggtc aaagaaagtg cacagaagag tgtgagatta     1200
266 atggatatgt gatcccagag ggagcattga ttctcttcaa tgtatggcaa gtaggaagag     1260
267 accccaaata ctgggacaga ccatcgaggt tccgtcctga gaggttccta gagacagggg     1320
268 ctgaagggga agcagggcct cttgatctta ggggacaaca ttttcaactt ctcccatttg     1380
269 ggtctgggag gagaatgtgc cctggagtca atctggctac ttcgggaatg gcaacacttc     1440
270 ttgcatctct tattcagtgc ttcgacttgc aagtgtctggg tccacaagga cagatattga     1500
271 aggggtggtga cgccaaagtt agcatggaag agagagccgg cctcactgtt ccaagggcac     1560
272 atagtcttgt ctgtgttcca cttgcaagga tcggcggtgc atctaaactc ctttcttaat     1620
273 taagatcatc atcatatata atatttactt tttgtgtgtt gataatcatc atttcaataa     1680
274 ggtctcggtc atctactttt tatgaagtat ataagccctt ccatgcacat tgtatcatct     1740
275 cccatttgtc ttcgtttgct acctaaggca atcttttttt ttttagaatc acatcatcct     1800
276 actataaaact atcaatcctt atat                                     1824

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278 <210> SEQ ID NO: 10

279 <211> LENGTH: 521

280 <212> TYPE: PRT

281 <213> ORGANISM: Glycine max

283 <400> SEQUENCE: 10

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287 His Leu Arg Pro Thr Pro Thr Ala Lys Ser Lys Ala Leu Arg His Leu
288          20          25          30
290 Pro Asn Pro Pro Ser Pro Lys Pro Arg Leu Pro Phe Ile Gly His Leu
291          35          40          45
293 His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Leu Ile Asp Leu Ser
294          50          55          60
296 Lys Lys His Gly Pro Leu Phe Ser Leu Tyr Phe Gly Ser Met Pro Thr
297 65          70          75          80
299 Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln Thr His
300          85          90          95
302 Glu Ala Thr Ser Phe Asn Thr Arg Phe Gln Thr Ser Ala Ile Arg Arg
303          100         105         110
305 Leu Thr Tyr Asp Ser Ser Val Ala Met Val Pro Phe Gly Pro Tyr Trp
306          115         120         125
308 Lys Phe Val Arg Lys Leu Ile Met Asn Asp Leu Pro Asn Ala Thr Thr
309          130         135         140
311 Val Asn Lys Leu Arg Pro Leu Arg Thr Gln Gln Thr Arg Lys Phe Leu
312 145         150         155         160
314 Arg Val Met Ala Gln Gly Ala Glu Ala Gln Lys Pro Leu Asp Leu Thr
315          165         170         175
317 Glu Glu Leu Leu Lys Trp Thr Asn Ser Thr Ile Ser Met Met Met Leu
318          180         185         190
320 Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu Lys Ile

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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 06/27/2006
PATENT APPLICATION: US/09/857,581C TIME: 16:52:48

Input Set : A:\PTO.AMC.txt
Output Set: N:\CRF4\06272006\I857581C.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:66; Xaa Pos. 10,16,23,25,39,48,60,73,74,95,96,102,110,112,117,118,121
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Seq#:66; Xaa Pos. 223,253,259,263,264,268,272,285,292,293,294,301,306,311
Seq#:66; Xaa Pos. 312,325,328,329,334,342,377,381,385,387,393,394,402,404
Seq#:66; Xaa Pos. 413,422,428,429,435,447,453,459,485

VERIFICATION SUMMARY

DATE: 06/27/2006

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TIME: 16:52:48

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\06272006\I857581C.raw

L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:3460 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 after pos.:0
M:341 Repeated in SeqNo=66

**Raw Sequence Listing before editing
(for reference only)**



IFW16

RAW SEQUENCE LISTING

DATE: 06/27/2006

PATENT APPLICATION: US/09/857,581C

TIME: 16:15:25

Input Set : A:\corrected seq lst 6-19-06.txt

Output Set: N:\CRF4\06272006\I857581C.raw

3 <110> APPLICANT: Fader, Gary M.
 4 Jung, Woosuk
 5 Brian, McGonigle
 6 Odell, Joan T.
 7 Yu, Xiaodan
 9 <120> TITLE OF INVENTION: Nucleic Acid Fragments Encoding Isoflavone Synthase
 11 <130> FILE REFERENCE: BB1339RCE
 13 <140> CURRENT APPLICATION NUMBER: 09/857,581C
 C--> 14 <141> CURRENT FILING DATE: 2001-06-05
 16 <150> PRIOR APPLICATION NUMBER: PCT/US00/01,772
 17 <151> PRIOR FILING DATE: 2000-01-26
 19 <150> PRIOR APPLICATION NUMBER: 60/117,769
 20 <151> PRIOR FILING DATE: 1999-01-27
 22 <150> PRIOR APPLICATION NUMBER: 60/144,783
 23 <151> PRIOR FILING DATE: 1990-07-20
 25 <150> PRIOR APPLICATION NUMBER: 60/156,094
 26 <151> PRIOR FILING DATE: 1999-09-24
 28 <160> NUMBER OF SEQ ID NOS: 66
 30 <170> SOFTWARE: PatentIn version 3.3

Does Not Comply
Corrected Diskette Needed

ERRORED SEQUENCES

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 3116 <223> OTHER INFORMATION: Consensus sequence
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RAW SEQUENCE LISTING

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TIME: 16:15:26

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Output Set: N:\CRF4\06272006\I857581C.raw

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RAW SEQUENCE LISTING

DATE: 06/27/2006

PATENT APPLICATION: US/09/857,581C

TIME: 16:15:26

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Output Set: N:\CRF4\06272006\I857581C.raw

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3239 <221> NAME/KEY: MISC_FEATURE /
3240 <222> LOCATION: (170)..(170)
3241 <223> OTHER INFORMATION: Xaa=Gln or Arg
3243 <220> FEATURE:
3244 <221> NAME/KEY: MISC_FEATURE /
3245 <222> LOCATION: (175)..(175)
3246 <223> OTHER INFORMATION: Xaa=Val or Leu
3248 <220> FEATURE:
3249 <221> NAME/KEY: MISC_FEATURE /
3250 <222> LOCATION: (183)..(183)
3251 <223> OTHER INFORMATION: Xaa=Ala or Thr
3253 <220> FEATURE:
3254 <221> NAME/KEY: MISC_FEATURE /
3255 <222> LOCATION: (187)..(187)
3256 <223> OTHER INFORMATION: Xaa=Thr or Ile

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3258 <220> FEATURE:
3259 <221> NAME/KEY: MISC_FEATURE
3260 <222> LOCATION: (191)..(191)
3261 <223> OTHER INFORMATION: Xaa=Met or Val
3263 <220> FEATURE:
3264 <221> NAME/KEY: MISC_FEATURE
3265 <222> LOCATION: (209)..(209)
3266 <223> OTHER INFORMATION: Xaa=Phe or Tyr
3268 <220> FEATURE:
3269 <221> NAME/KEY: MISC_FEATURE
3270 <222> LOCATION: (219)..(219)
3271 <223> OTHER INFORMATION: Xaa=Arg or Trp
3273 <220> FEATURE:
3274 <221> NAME/KEY: MISC_FEATURE
3275 <222> LOCATION: (223)..(223)
3276 <223> OTHER INFORMATION: Xaa=Tyr or His
3278 <220> FEATURE:
3279 <221> NAME/KEY: MISC_FEATURE
3280 <222> LOCATION: (253)..(253)
3281 <223> OTHER INFORMATION: Xaa=Gly or Glu
3283 <220> FEATURE:
3284 <221> NAME/KEY: MISC_FEATURE
3285 <222> LOCATION: (259)..(259)
3286 <223> OTHER INFORMATION: Xaa=Lys or Glu
3288 <220> FEATURE:
3289 <221> NAME/KEY: MISC_FEATURE
3290 <222> LOCATION: (263)..(263)
3291 <223> OTHER INFORMATION: Xaa=Val or Asp
3293 <220> FEATURE:
3294 <221> NAME/KEY: MISC_FEATURE
3295 <222> LOCATION: (264)..(264)
3296 <223> OTHER INFORMATION: Xaa=Val, Asp, or Ile
3298 <220> FEATURE:
3299 <221> NAME/KEY: MISC_FEATURE
3300 <222> LOCATION: (268)..(268)
3301 <223> OTHER INFORMATION: Xaa=Ala or Val
3303 <220> FEATURE:
3304 <221> NAME/KEY: MISC_FEATURE
3305 <222> LOCATION: (272)..(272)
3306 <223> OTHER INFORMATION: Xaa=Phe or Leu
3308 <220> FEATURE:
3309 <221> NAME/KEY: MISC_FEATURE
3310 <222> LOCATION: (285)..(285)
3311 <223> OTHER INFORMATION: Xaa=Thr or Met
3313 <220> FEATURE:
3314 <221> NAME/KEY: MISC_FEATURE
3315 <222> LOCATION: (292)..(292)
3316 <223> OTHER INFORMATION: Xaa=ANY AMINO ACID
3318 <220> FEATURE:

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3319 <221> NAME/KEY: MISC_FEATURE
3320 <222> LOCATION: (293)..(293) ✓
3321 <223> OTHER INFORMATION: Xaa=ANY AMINO ACID
3323 <220> FEATURE:
3324 <221> NAME/KEY: MISC_FEATURE
3325 <222> LOCATION: (294)..(294) ✓
3326 <223> OTHER INFORMATION: Xaa=Thr or Ile
3328 <220> FEATURE:
3329 <221> NAME/KEY: MISC_FEATURE
3330 <222> LOCATION: (301)..(301) ✓
3331 <223> OTHER INFORMATION: Xaa=Phe or Leu
3333 <220> FEATURE:
3334 <221> NAME/KEY: MISC_FEATURE
3335 <222> LOCATION: (306)..(306) ✓
3336 <223> OTHER INFORMATION: Xaa=Thr or Ile
3338 <220> FEATURE:
3339 <221> NAME/KEY: MISC_FEATURE
3340 <222> LOCATION: (311)..(311) ✓
3341 <223> OTHER INFORMATION: Xaa=Val or Glu
3343 <220> FEATURE:
3344 <221> NAME/KEY: MISC_FEATURE
3345 <222> LOCATION: (312)..(312) ✓
3346 <223> OTHER INFORMATION: Xaa=Val or Ala
3348 <220> FEATURE:
3349 <221> NAME/KEY: MISC_FEATURE
3350 <222> LOCATION: (325)..(325) ✓
3351 <223> OTHER INFORMATION: Xaa=Arg or Lys
3353 <220> FEATURE:
3354 <221> NAME/KEY: MISC_FEATURE
3355 <222> LOCATION: (328)..(328) ✓
3356 <223> OTHER INFORMATION: Xaa=Gln or Glu
3358 <220> FEATURE:
3359 <221> NAME/KEY: MISC_FEATURE
3360 <222> LOCATION: (329)..(329) ✓
3361 <223> OTHER INFORMATION: Xaa=ANY AMINO ACID
3363 <220> FEATURE:
3364 <221> NAME/KEY: MISC_FEATURE
3365 <222> LOCATION: (334)..(334) ✓
3366 <223> OTHER INFORMATION: Xaa=Val or Ala
3368 <220> FEATURE:
3369 <221> NAME/KEY: MISC_FEATURE
3370 <222> LOCATION: (342)..(342) ✓
3371 <223> OTHER INFORMATION: Xaa=Arg or Ile
3373 <220> FEATURE:
3374 <221> NAME/KEY: MISC_FEATURE
3375 <222> LOCATION: (377)..(377) ✓
3376 <223> OTHER INFORMATION: Xaa=Thr or Ile
3378 <220> FEATURE:
3379 <221> NAME/KEY: MISC_FEATURE

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3380 <222> LOCATION: (381)..(381) ✓
3381 <223> OTHER INFORMATION: Xaa=Glu or Gly
3383 <220> FEATURE:
3384 <221> NAME/KEY: MISC_FEATURE
3385 <222> LOCATION: (385)..(385) ✓
3386 <223> OTHER INFORMATION: Xaa=Tyr, His, or Cys
3388 <220> FEATURE:
3389 <221> NAME/KEY: MISC_FEATURE
3390 <222> LOCATION: (387)..(387) ✓
3391 <223> OTHER INFORMATION: Xaa=Ile or Thr
3393 <220> FEATURE:
3394 <221> NAME/KEY: MISC_FEATURE
3395 <222> LOCATION: (393)..(393) ✓
3396 <223> OTHER INFORMATION: Xaa=Val or Ile
3398 <220> FEATURE:
3399 <221> NAME/KEY: MISC_FEATURE
3400 <222> LOCATION: (394)..(394) ✓
3401 <223> OTHER INFORMATION: Xaa=Leu or Pro
3403 <220> FEATURE:
3404 <221> NAME/KEY: MISC_FEATURE
3405 <222> LOCATION: (402)..(402) ✓
3406 <223> OTHER INFORMATION: Xaa=Arg or Lys
3408 <220> FEATURE:
3409 <221> NAME/KEY: MISC_FEATURE
3410 <222> LOCATION: (404)..(404) ✓
3411 <223> OTHER INFORMATION: Xaa=Ser or Pro
3413 <220> FEATURE:
3414 <221> NAME/KEY: MISC_FEATURE
3415 <222> LOCATION: (413)..(413) ✓
3416 <223> OTHER INFORMATION: Xaa=Ser or Phe
3418 <220> FEATURE:
3419 <221> NAME/KEY: MISC_FEATURE
3420 <222> LOCATION: (422)..(422) ✓
3421 <223> OTHER INFORMATION: Xaa=Glu or Gly
3423 <220> FEATURE:
3424 <221> NAME/KEY: MISC_FEATURE
3425 <222> LOCATION: (428)..(428) ✓
3426 <223> OTHER INFORMATION: Xaa=Gly or Arg
3428 <220> FEATURE:
3429 <221> NAME/KEY: MISC_FEATURE ✓
3430 <222> LOCATION: (429)..(429)
3431 <223> OTHER INFORMATION: Xaa=Pro or Leu
3433 <220> FEATURE:
3434 <221> NAME/KEY: MISC_FEATURE
3435 <222> LOCATION: (435)..(435) ✓
3436 <223> OTHER INFORMATION: Xaa=Gln or Arg
3438 <220> FEATURE:
3439 <221> NAME/KEY: MISC_FEATURE
3440 <222> LOCATION: (447)..(447)

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3441 <223> OTHER INFORMATION: Xaa=Arg or Gly
3443 <220> FEATURE:
3444 <221> NAME/KEY: MISC_FEATURE
3445 <222> LOCATION: (453)..(453)
3446 <223> OTHER INFORMATION: Xaa=Asn, Ser, or Ile
3448 <220> FEATURE:
3449 <221> NAME/KEY: MISC_FEATURE
3450 <222> LOCATION: (459)..(459)
3451 <223> OTHER INFORMATION: Xaa=Met or Thr
3453 <220> FEATURE:
3454 <221> NAME/KEY: MISC_FEATURE
3455 <222> LOCATION: (485)..(485)
3456 <223> OTHER INFORMATION: Xaa=Asp or Gly
3458 <400> SEQUENCE: 66
W--> 3460 Met Leu Leu Glu Leu Ala Leu Gly Leu Xaa Val Leu Ala Leu Phe Xaa
      3461 1 5 10 15
      3463 His Leu Arg Pro Thr Pro Xaa Ala Xaa Ser Lys Ala Leu Arg His Leu
      3464 20 25 30
      3466 Pro Asn Pro Pro Ser Pro Xaa Pro Arg Leu Pro Phe Ile Gly His Xaa
      3467 35 40 45
      3469 His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Xaa Ile Asp Leu Ser
      3470 50 55 60
      3472 Lys Lys His Gly Pro Leu Phe Ser Xaa Xaa Phe Gly Ser Met Pro Thr
      3473 65 70 75 80
      3475 Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln Xaa Xaa
      3476 85 90 95
      3478 Glu Ala Thr Ser Phe Xaa Thr Arg Phe Gln Thr Ser Ala Xaa Arg Xaa
      3479 100 105 110
      3481 Leu Thr Tyr Asp Xaa Xaa Val Ala Xaa Xaa Pro Xaa Gly Pro Tyr Trp
      3482 115 120 125
      3484 Xaa Phe Val Arg Lys Leu Ile Met Asn Asp Leu Leu Asn Ala Thr Thr
      3485 130 135 140
      3487 Val Asn Xaa Leu Arg Pro Leu Arg Thr Gln Gln Ile Arg Lys Xaa Leu
      3488 145 150 155 160
      3490 Arg Xaa Met Ala Gln Xaa Ala Glu Ala Xaa Lys Pro Leu Asp Xaa Thr
      3491 165 170 175
      3493 Glu Glu Leu Leu Lys Trp Xaa Asn Ser Thr Xaa Ser Met Met Xaa Leu
      3494 180 185 190
      3496 Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu Lys Ile
      3497 195 200 205
      3499 Xaa Gly Glu Tyr Ser Leu Thr Asp Phe Ile Xaa Pro Leu Lys Xaa Leu
      3500 210 215 220
      3502 Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn Lys Phe
      3503 225 230 235 240
      3505 Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Xaa Ile Val Arg
      3506 245 250 255
      3508 Arg Arg Xaa Asn Gly Glu Xaa Xaa Glu Gly Glu Xaa Ser Gly Val Xaa
      3509 260 265 270
      3511 Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glu Thr Xaa Glu Ile Lys

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3512          275          280          285
3514 Ile Thr Lys Xaa Xaa Xaa Lys Gly Leu Val Val Asp Xaa Phe Ser Ala
3515          290          295          300
3517 Gly Xaa Asp Ser Thr Ala Xaa Xaa Thr Glu Trp Ala Leu Ala Glu Leu
3518 305          310          315          320
3520 Ile Asn Asn Pro Xaa Val Leu Xaa Xaa Ala Arg Glu Glu Xaa Tyr Ser
3521          325          330          335
3523 Val Val Gly Lys Asp Xaa Leu Val Asp Glu Val Asp Thr Gln Asn Leu
3524          340          345          350
3526 Pro Tyr Ile Arg Ala Ile Val Lys Glu Thr Phe Arg Met His Pro Pro
3527          355          360          365
3529 Leu Pro Val Val Lys Arg Lys Cys Xaa Glu Glu Cys Xaa Ile Asn Gly
3530 370          375          380
3532 Xaa Val Xaa Pro Glu Gly Ala Leu Xaa Xaa Phe Asn Val Trp Gln Val
3533 385          390          395          400
3535 Gly Xaa Asp Xaa Lys Tyr Trp Asp Arg Pro Ser Glu Xaa Arg Pro Glu
3536          405          410          415
3538 Arg Phe Leu Glu Thr Xaa Ala Glu Gly Glu Ala Xaa Xaa Leu Asp Leu
3539          420          425          430
3541 Arg Gly Xaa His Phe Gln Leu Leu Pro Phe Gly Ser Gly Arg Xaa Met
3542          435          440          445
3544 Cys Pro Gly Val Xaa Leu Ala Thr Ser Gly Xaa Ala Thr Leu Leu Ala
3545          450          455          460
3547 Ser Leu Ile Gln Cys Phe Asp Leu Gln Val Leu Gly Pro Gln Gly Gln
3548 465          470          475          480
3550 Ile Leu Lys Gly Xaa Asp Ala Lys Val Ser Met Glu Glu Arg Ala Gly
3551          485          490          495
3553 Leu Thr Val Pro Arg Ala His Ser Leu Val Cys Val Pro Leu Ala Arg
3554          500          505          510
3556 Ile Gly Val Ala Ser Lys Leu Leu Ser
3557          515          520

```

E--> 3560 59

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L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:3460 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 after pos.:0

M:341 Repeated in SeqNo=66

L:3560 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:66